**Curriculum Vitae**

**Research topics**

* Structural biology of actin based cytoskeleton
* Structure-function analysis metallo-enzymes involved in protection from chemical and oxidative damage
* X-ray induced radiation damage

**Research achievements in numbers**

* 123 papers in peer-reviewed journals (4585 citations, H-index 37), 5 book chapters
* Two publications in Cell, two in Nature Molecular Structural Biology, three in PNAS and two Trends in Biochemical Sciences
* >70 invited talks at national and international conferences or institutions
* 35 research grants as PI (total budget ~6.0 million €).

**Prof. Dr. Kristina Djinovic-Carugo**

Head of the Department of Structural and Computational Biology, Max F. Perutz Laboratories

University of Vienna

Campus Vienna Biocenter 5, 1030 Vienna, Austria

PHONE +43 1 4277 52203

EMAIL kristina.djinovic@univie.ac.at

WEB [www.mfpl.ac.at/groups/mfpl-group/group-info/djinovic.html](http://www.mfpl.ac.at/groups/mfpl-group/group-info/djinovic.html)

**Personal data**

Born 1963 in Ljubljana, Slovenia - one child (born 1994)

**Higher education**

1992 PhD in Chemistry*,* at the University of Ljubljana (Slovenia). Supervisors: Prof. M. Bolognesi (Uni. Pavia, Italy) and Prof. L. Golic

1986-1989 Master in Chemistry, at the University of Ljubljana (Slovenia); majors: small-molecule crystallography, solid state physics, biophysics, statistical thermodynamics (Master diploma grade with distinction; 10/10)

1981-1986 Diploma in Chemistry at the University of Ljubljana (Slovenia)

**Appointments**

Since 2004 Full Professor of Structural Biology, Department of Structural and Computational Biology, Max F. Perutz Laboratories, University of Vienna, Austria

Since 2009 Head of Department of Structural and Computational Biology, Max F. Perutz Laboratories, University of Vienna, Austria

2010-2016 Director of Laura Bassi Center for Optimized Structural Studies

1999-2004 Head of Structural Biology and Crystallography Unit, Sincrotrone Trieste, Italy

1997-1999 Staff Scientist, Structural Biology Programme, EMBL-Heidelberg, Germany

1995-1997 EMBO Post-Doctoral Fellow, Structural Biology Programme, EMBL-Heidelberg

1992-1995 Post-Doctoral Fellow, Dept. Microbiol. and Genetics, University of Pavia, Italy

**Fellowships and Awards**

1995 EMBO long-term postdoctoral fellowship

1995 Alexander von Humboldt postdoctoral fellowship (declined)

2016 Elected EMBO member

**Supervision of Graduate Students and Postdoctoral Fellows**

2004 – 2017 15 Postdocs / 20 PhD / 11 Master Students

Department of Structural and Computational Biology, MFPL, Univ. of Vienna, Austria

1992 – 2004 4 Postdocs / 2 PhD / 2 Master Students

Structural Biology and Crystallography Unit, Sincrotrone Trieste, Italy

**Teaching activities**

University of Vienna, Austria

Teaching Macromolecular crystallography, Advanced macromolecular crystallography and Structural Biology I, Biophysical Methods for Biological Macromolecules for students of Molecular Biology and Chemistry (since study year 2004/2005 onwards).

Coordinator of Seminar series Modern concepts in structural biology for students of Molecular Biology and Chemistry (since study year 2004/2005 onwards).

Vice-Speaker of Doctoral College “Integrative Structural Biology” (since 2016 onwards).

Participation in Seminar Series Dynamic Biochemistry for students of Molecular Biology at (since study year 2008/2009 onwards).

University of Ljubljana, Slovenia

Teaching Methods for Determining 3D Macromolecular Structure for students of Biochemistry (since study year 1998/99).

Teaching Modern and Complementary Approaches in Structural Biology for students of Biochemistry (since study year 2013/2014)

Mentoring numerous diploma, master and doctoral students in Vienna and Ljubljana.

**Institutional Responsibilities**

2015 Member of appointment committee for Scientific Director of MFPL, Univ. of Vienna, Austria

Since 2011 Member of User Committee of the "Protein Technology Facilities" at the Vienna Biocenter Campus Facility (VBCF)

Since 2009 Head of Department for Structural and Computational Biology, Univ. of Vienna, Austria

Since 2004 Member of habilitation committees (3x head of committee) Univ. of Vienna, Austria

Since 2004 Member of appointment committees (2x head of committee) or reviewer for selection of new professors at the Univ. of Vienna and Univ. of Graz, Austria

**Fund Raising**

Since 1999 I have raised a total of 5.6 million Euros as PI with grants from funding agencies in Austria, Germany, Slovenia, United Kingdom and Europe (5th, 6th, 7th EU Framework Programmes) Coordinator of EU-FP5 RTD project “EXMAD” (2000-2004); Coordinator of EU-FP7 ITN “MUZIC”; Coordinator of Laura Bassi “Center for Optimised Structural Studies” (2010-2016); member of Wellcome Trust Collaborative Award (since 2016); joint director of Christian Doppler Laboratory for High-Content Structural Biology and Biotechnology (since 2017).

Most important funded research projects

* Coordinator of EU‐FP5 RTD project (HPRI‐1999‐CT‐50015): **Extension of MAD capabilities at synchrotron infrastructures (EXMAD)** (Period: 1.3.2000 ‐ 28.2.2004)
* Director/coordinator of FFG funded **Laura Bassi Center for Optimised Structural Studies** (COSS) (Period 1.1.2010 – 31.12.2016)
* Coordinator of EU‐FP7 ITN project: **Muscle Z‐disk Protein Complexes: from atomic structure to physiological function (MUZIC)** (Period: 1.11.2009 – 31.10.2013)
* Vice‐Coordinator of DFG/FWF Forschergruppe **Structure, Function and Regulation of the Myofibrillar Z‐disc Interactome** (Period:01.02.2011–31.12.2014)
* Partner of DFG/FWF Forschergruppe **Structure, Function and Regulation of the Myofibrillar Z‐disc Interactome** (Period 01.05.2014 – 30.04.2017)
* Partner in Welcome Trust Collaborative Award, **An integrated approach to the muscle Z‐disk: from atomic structure to human disease** (Period 1.10. 2016 – 30.9.2020)
* Co-director (with R. Konrat) of **Christian Doppler Laboratory for High-Content Structural Biology and Biotechnology** (Period 1.3. 2017 – 28.2. 2019)

**Commissions of Trust**

2001-2004 Member of Scientific Advisory Council of the Centre of Excellence in Biocrystallography (CEB) at the University of Trieste, Italy

2008-2011 Member of ESRF Review Committee in area of Macromolecular Crystallography

2009-2013 Vice-speaker of PhD Programme Structure and Interaction of Biological Macromolecules

2012-2014 Member of Scientific Advisory board of French Synchrotron facility Soleil

2011-2014 Elected member of Board of Austrian Science Fund (FWF)

2013-2015 Member of Project Evaluation Panel of Max IV Swedish Synchrotron Facility

2012-2016 Member of Project Evaluation Panel of BioStruct-X

Since 2012 Member of Project Evaluation Panel of EMBL Hamburg

Since 2013 Member of Scientific Advisory Board of Max IV Swedish Synchrotron Facility

Since 2016 Vice-coordinator of PhD Programme Integrative Structural Biology

Since 2016 Member of Scientific Advisory Board of Neutrons and Synchrotron Radiation (NESY)

Since 2016 Member of Scientific Advisory Board of the Czech Infrastructure for Integrative Structural Biology (CIISB)

Since 2017 Member of International Advisory Board of Malopolska Center of Biotechnology, Krakow, Poland

**Membership in Editorial Boards of International Journals**

Since 2015 Member of the Editorial Board of Journal Muscle Research and Cell Motility

Since 2014 Associated Editor of Science Frontiers Molecular Biosciences

**Reviewing activities**

For scientific journals:

J. Mol. Biol., Structure, Acta Cryst., J. Biol. Chem., FEBS Letters, BBA Proteins and Proteomics, Mol. Biol. Evol., Proteins, Protein Science, PLoS Biology, J. Muscle Res. Cell Motil.

For foreign funding organizations:

DFG (Germany), ANR (France), EC-FP7, EC-FP6 (European Community), ARRS (Slovenia), NOW (The Netherlands), CIVR (Italy), AIRC (Italy), BBSRC (UK), MRC (UK), Portuguese Foundation for Science and Technology (PT), ERC (European Community)

For PhD theses from foreign universities:

Sweden, Italy, Germany, Slovenia, Norway, EMBL, Finland

**Organization of International Scientific Meetings**

2000 Organizer of *Workshop*: *Challenges in Crystallography of Macromolecular Assemblies*, Elettra, Trieste, Italy (40-50 participants)

2003 Co-organizer (with Keith Wilson, York, UK) of the *Seventh International School on the Crystallography of Biological Macromolecules*, Como, Italy (120 participants)

2003 Co-organizer of the *Winter School on Phasing with Soft X-rays*, Bressanone/Brixen, Italy

2003 Co-organizer (with Manfred Weiss, EMBL-Hamburg, DE) of *Workshop*: *Validation of Structures and Structure Determination Steps,* Elettra, Trieste, Italy (40 participants)

2006 Scientific organizer of the Winter School on Phasing with Soft X-rays, Seefeld, Austria (40 participants)

2007 Scientific organizer (with Jacques Rohayem, Eric Snijder, Johan Neyts, Paul Tucker) of an *EMBO workshop: 'RNA viruses: replication, evolution and drug design*' - cosponsored by VIZIER, Vienna, Austria (90 participants)

2009 Scientific organizer (together with M. Weiss and U. Mueller) of *Winter School on Soft X-rays in Macromolecular Crystallography*, Berlin, Germany (50 participants)

2007, 2009,

2011, 2013,

2016 Scientific organizer (with M. Weiss and U. Mueller) of *Workshop on Data Collection using synchrotron radiation* (Berlin, Germany) (25-30 participants each)

2012 Scientific organizer (with M. Weiss and S. McSweany) of *4th Winter School on Soft X-rays in Macromolecular Crystallography*, Grenoble, France (50 participants)

2013 Scientific organizer of the *16th Heart of Europe Bio-crystallography Meeting* (HEC-16), Attersee, Austria (120 participants)

2013 Scientific organizer (with M. Gautel, D. Fuerst, M. Wilmanns) of *Conference Z-disk structure and dynamics*, Hamburg, Germany (70 participants)

2014 Scientific organizer (with S. Galler) of *European Muscle Conference*, Salzburg, Austria (350 participants)

2016 Scientific organizer (with S.Kojic and M. Gautel) of Conference *Structure and Dynamics of the Sarcomere,* Belgrade, Serbia (70 participants)

2019 Organizer (with K. Hradil and R. Miletich) of 32nd *European Crystallographic Meeting*, Vienna, Austria (expected >1000 participants)

**Most important invitations to present at academic conferences (64 invited oral presentations)**

Invited talk 12th Membrane Skeleton Recent Advances and Future Research Directions, 15 –18June 2008, Zakopane, Poland

Invited talk 9th European Biological Inorganic Chemistry Conference, 2 – 6 September 2008, Wroclaw, Poland

Invited talk Joint Meeting of DFG Research Groups: Cross-striated Muscle in Health and Disease, 18 -20 May 2011, Bonn, Germany

Invited talk 27th European Crystallographic Meeting, 6 – 11 August 2012, Bergen, Norway

Invited talk European Muscle Conference, 1 – 5 September, 2012, Rhodes, Greece

Plenary lecture Chemistry towards Biology**,** 10 – 13 September 2013, Trieste, Italy

Invited talk International Union of Crystallography, 5 – 12 August 2014, Montreal, Canada

Invited talk American Crystallographic Association, 25 – 29 July 2015, Philadelphia, US

Invited talk 3rd Annual Congress of The European Society for Translational Medicine, 1 – 4 September 2015, Vienna, Austria

Keynote Lecture CRYSTAL30, Society of Crystallographers of Australia and New Zealand, 29 March – 1 April, 2016, Hobart, Australia

Invited talk Conference of Structure and Dynamics of the Sarcomere, 4 – 6 May 2016, Belgrade, Serbia

Invited talk 30th European Crystallographic Meeting, 29 August – 1 September 2016, Basel, Switzerland

Invited talk Instruct Biennial Structural Biology Conference, 24 – 26 May 2017, Brno, Czech Republic

Invited talk Advances in Rare & Inherited Cardiovascular Disease Symposium, 1 June 2017, London, UK

Invited talk 5th International Conference on Integrative Biology, 19 – 21 June 2017, London, UK

Invited talk EMBO Course Structural and biophysical methods for biological macromolecules in solution, 6 – 14 December 2017

**Most relevant external collaborations**

Christian Obinger (Univ. Natural Resources and Life Sciences, Vienna, Austria, structural and functional studies of heme-dependent peroxidases, dismutases and oxigenases); Michael Wagner and Holger Daims (Univ. Vienna, Austria; structural and functional studies of chlorite-dismutase enzymes family); Mathias Gautel (King’s College London, UK, regulation of muscle α-actinin-2); Dmitri Svergun (EMBL-Hamburg, Germany; small angle X-ray scattering analysis); Dieter Fuerst (Univ. Bonn, Germany; function and dynamics of sarcomeric Z-disk proteins); Bettina Warscheid (Univ. Freiburg, Germany; crosslinking-coupled mass spectrometry); Edward Egelman (Univ. Virginia; US, electron-microscopic analysis of decorated F-actin); Perry Elliott (University College London, UK; mutations in Z-disk causing inherited cardiovascular diseases)

**Publication summary**

**123 papers** in peer-reviewed journals, **5 book chapters**

Total number of citations: **~~3489~~** ~~(Scopus)~~**, 5044** (Google Scholar), **~~3577~~** ~~(ISI)~~

H-index: **37** (Google Scholar), **~~33~~** ~~(Scopus),~~ **~~33~~** ~~(ISI)~~

Scopus https://www.scopus.com/cto2/main.uri?origin=resultslist&stateKey=CTOF\_789893190

Google Scholar https://scholar.google.com/citations?user=4psspWIAAAAJ&hl=en

ORCID [http://orcid.org/[0000-0003-0252-2972](http://orcid.org/0000-0003-0252-2972)](http://orcid.org/0000-0002-9778-7684)

**10 most important publications in last 5 years. Publications most relevant to the proposed research are marked with an asterisk \*)**

**1**. Grison, M., Merkel, U., Kostan, J., **Djinović-Carugo**, **K**., and Rief, M. (2017) alpha-Actinin/titin interaction: A dynamic and mechanically stable cluster of bonds in the muscle Z-disk. ***Proc Natl Acad Sci U S A*** 114, 1015-1020

**2.** Hofbauer, S., Mlynek, G., Milazzo, L., Puhringer, D., Maresch, D., Schaffner, I., Furtmuller, P. G., Smulevich, G., **Djinović-Carugo, K.**, and Obinger, C. (2016) Hydrogen peroxide-mediated conversion of coproheme to heme b by HemQ-lessons from the first crystal structure and kinetic studies. ***FEBS J*** 283, 4386-4401**\***

**3.** Drmota Prebil, S., Slapsak, U., Pavsic, M., Ilc, G., Puz, V., de Almeida Ribeiro, E., Anrather, D., Hartl, M., Backman, L., Plavec, J., Lenarcic, B., and **Djinović-Carugo, K**. (2016) Structure and calcium-binding studies of calmodulin-like domain of human non-muscle alpha-actinin-1. ***Sci Rep*** 6, 27383

**4.** Song, J. G., Kostan, J., Drepper, F., Knapp, B., de Almeida Ribeiro, E., Jr., Konarev, P. V., Grishkovskaya, I., Wiche, G., Gregor, M., Svergun, D. I., Warscheid, B., and **Djinović-Carugo, K**. (2015) Structural Insights into Ca-Calmodulin Regulation of Plectin 1a-Integrin beta4 Interaction in Hemidesmosomes. ***Structure*** 23, 1-13

**5.** Byrgazov, K., Grishkovskaya, I., Arenz, S., Coudevylle, N., Temmel, H., Wilson, D. N., **Djinović-Carugo, K**., and Moll, I. (2015) Structural basis for the interaction of protein S1 with the Escherichia coli ribosome. ***Nucleic Acids Res*** 43, 661-673

**6**. Ribeiro Ede, A., Jr., Pinotsis, N., Ghisleni, A., Salmazo, A., Konarev, P. V., Kostan, J., Sjoblom, B., Schreiner, C., Polyansky, A. A., Gkougkoulia, E. A., Holt, M. R., Aachmann, F. L., Zagrovic, B., Bordignon, E., Pirker, K. F., Svergun, D. I., Gautel, M., and **Djinović-Carugo, K**. (2014) The structure and regulation of human muscle alpha-actinin. ***Cell*** 159, 1447-1460

**7.** Pavsic, M., Guncar, G., **Djinović-Carugo, K**., and Lenarcic, B. (2014) Crystal structure and its bearing towards an understanding of key biological functions of EpCAM. ***Nature communications*** 5, 4764

**8.** Kostan, J., Salzer, U., Orlova, A., Toro, I., Hodnik, V., Senju, Y., Zou, J., Schreiner, C., Steiner, J., Merilainen, J., Nikki, M., Virtanen, I., Carugo, O., Rappsilber, J., Lappalainen, P., Lehto, V. P., Anderluh, G., Egelman, E. H., and **Djinović-Carugo, K**. (2014) Direct interaction of actin filaments with F-BAR protein pacsin2. ***EMBO Rep*** 15, 1154-1162

**9.** Hofbauer, S., Gysel, K., Bellei, M., Hagmuller, A., Schaffner, I., Mlynek, G., Kostan, J., Pirker, K. F., Daims, H., Furtmuller, P. G., Battistuzzi, G., **Djinović-Carugo, K.,** and Obinger, C. (2014) Manipulating Conserved Heme Cavity Residues of Chlorite Dismutase: Effect on Structure, Redox Chemistry, and Reactivity. ***Biochemistry*** 53, 77-89**\***

**10.** Mlynek, G., Sjoblom, B., Kostan, J., Fureder, S., Maixner, F., Gysel, K., Furtmuller, P. G., Obinger, C., Wagner, M., Daims, H., and **Djinović-Carugo, K**. (2011) Unexpected Diversity of Chlorite Dismutases: a Catalytically Efficient Dimeric Enzyme from Nitrobacter winogradskyi. ***J Bacteriol*** 193, 2408-2417**\***

**List of all publications** (JBC format)

{Schaffner, 2017 #384;Salzer, 2017 #385;Rieder, 2017 #386;Puz, 2017 #387;Lobner, 2017 #388;Lobner, 2017 #372;Kaufmann, 2017 #381;Grison, 2017 #366;Grishkovskaya, 2017 #369;Bezerra, 2017 #371;Sousa, 2016 #320;Murphy, 2016 #353;Hofbauer, 2016 #359;Hofbauer, 2016 #354;Hofbauer, 2016 #358;Gautel, 2016 #318;Fedosyuk, 2016 #365;Drmota Prebil, 2016 #357;Carugo, 2016 #355;Song, 2015 #314;Martens, 2015 #315;Hofbauer, 2015 #312;Djinović-Carugo, 2015 #317;Djinović-Carugo, 2015 #313;Byrgazov, 2015 #309;Ribeiro Ede, 2014 #316;Pavsic, 2014 #304;Mlynek, 2014 #299;Kostan, 2014 #305;Hofbauer, 2014 #302;Carugo, 2014 #300;Sponder, 2013 #233;Morriswood, 2013 #270;Milojevic, 2013 #293;Milojevic, 2013 #291;Linnemann, 2013 #269;Khan, 2013 #294;Carugo, 2013 #292;Carugo, 2013 #267;Borko, 2013 #297;Nguyen, 2012 #257;Kley, 2012 #259;Hofbauer, 2012 #255;Hofbauer, 2012 #268;Hammerle, 2012 #264;Djinović-Carugo, 2012 #262;de Almeida Ribeiro, 2012 #260;Carugo, 2012 #261;Sygmund, 2011 #247;Svidova, 2011 #202;Mlynek, 2011 #227;Duff, 2011 #235;Beich-Frandsen, 2011 #229;Beich-Frandsen, 2011 #237;Kostan, 2010 #199;Khan, 2010 #201;Galkin, 2010 #198;Djinović-Carugo, 2010 #195;Chen, 2010 #186;Toro, 2009 #101;Sjoblom, 2009 #108;Pinotsis, 2009 #89;Macedo, 2009 #104;Sjoblom, 2008 #88;Sjoblom, 2008 #86;Sjekloca, 2007 #79;Carugo, 2007 #80;Levanon, 2005 #22;Franzot, 2005 #4;Djinović-Carugo, 2005 #21;Carugo, 2005 #50;Wuerges, 2004 #1;Toeroe, 2004 #18;Spagnolo, 2004 #2;Sjekloca, 2004 #19;Polentarutti, 2004 #20;Mueller-Dieckmann, 2004 #15;Haltia, 2003 #14;Evans, 2003 #16;Djinović-Carugo, 2003 #17;Wuerges, 2002 #31;Gimona, 2002 #5;Djinović-Carugo, 2002 #6;Weiss, 2001 #12;Brown, 2000 #11;Djinović-Carugo, 1999 #8;Djinović-Carugo, 1999 #7;Bordo, 1999 #243;Baraldi, 1999 #43;Djinović-Carugo, 1998 #74;Banuelos, 1998 #10;Banuelos, 1998 #76;Luchinat, 1997 #73;Djinović-Carugo, 1997 #9;Djinović-Carugo, 1996 #39;Sartori, 1995 #69;Polticelli, 1995 #67;Merli, 1995 #71;Bolognesi, 1995 #68;Ascenzi, 1995 #72;Tomova, 1994 #51;Djinović-Carugo, 1994 #65;Djinović-Carugo, 1994 #45;Bordo, 1994 #244;Bolognesi, 1994 #66;Djinović-Carugo, 1993 #49;Djinović-Carugo, 1993 #41;Carugo, 1993 #62;Djinović, 1992 #57;Djinović, 1992 #60;Djinović, 1992 #25;Djinović, 1992 #24;Djinović, 1992 #61;Desideri, 1992 #26;Carugo, 1992 #59;Djinović, 1991 #63;Djinović, 1991 #27;Carugo, 1991 #58;Carugo, 1991 #56;Djinović, 1990 #64;Djinović, 1989 #55;Djinović, 1989 #54;Djinović, 1988 #241}